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ABSTRACT

This literature review examines research issues in anorexia nervosa, including conceptual issues and methodological considerations. Research on the family's contribution to the disorder is reviewed. The demographic characteristics of social class, birth order, history of sexual abuse, and biological and genetic factors are examined. Individual pathology in the family is reviewed, focusing on weight problems, psychiatric disorders, and substance abuse. Family relationships are examined, focusing on self report and retrospective studies and interactional research. It is concluded that research literature reflects conflicting conclusions regarding the presence of psychopathology in the families of anorexics. It is recommended that better-controlled comparative research is needed before conclusions about typical family characteristics or patterns can be drawn. It is concluded that since research studies families in which the disorder already exists, it is difficult to determine whether particular family characteristics or patterns existed prior to onset or developed as result of the disorder. (ABL)

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# ANOREXIA NERVOSA: FAMILY CHARACTERISTICS AND FAMILY INTERACTION PATTERNS

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A Doctoral Research Paper

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In Partial Fulfillment

of the Requirements for the Degree

Doctor of Psychology

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by

Susan Fellerman Greer

May 1991

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ANOREXIA NERVOSA: FAMILY CHARACTERISTICS

AND FAMILY INTERACTION PATTERNS

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ABSTRACT

ANOREXIA NERVOSA: FAMILY CHARACTERISTICS AND FAMILY INTERACTION PATTERNS

by

Susan Fellerman Greer

This paper identifies methodological problems concerning research on anorexia nervosa, reviews empirical articles on family characteristics and family interaction patterns of subjects with anorexia nervosa, and identifies areas for further research. The research literature reflects conflicting conclusions regarding the presence of psychopathology in the families of anorexics. Better-controlled comparative research is needed before conclusions about typical family characteristics or patterns can be drawn. Since the research studies families in which the disorder already exists, it is difficult to determine whether particular family characteristics or patterns existed prior to onset or developed as a result of the disorder.

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# ANOREXIA NERVOSA: FAMILY RELATIONSHIPS AND FAMILY INTERACTION PATTERNS

## Introduction

Historically, the condition known today as anorexia nervosa was first documented in the English medical literature by Richard Morton in 1720. Morton described the case of an 18 year-old anorexic woman whom he diagnosed with "nervous consumption" (Dickstein, 1985). In the early 1870's physicians Gull and Lasegue described several female patients as having symptoms of what is now called anorexia nervosa. These symptoms included emaciation leading to amenorrhea, denial of food and appetite, and the patients' abnormal acceptance of this condition. Gull coined the term "anorexia nervosa" in 1874 (Crisp, Hsu, Harding, & Hartshorn, 1980).

Eating disorders have drawn an increased amount of attention in recent years. There are several reasons for this. First, the incidence of anorexia nervosa and related eating disorders is increasing. This disorder is now showing up among all age groups and socioeconomic levels (Gilbert & DeBlassie, 1984). An increased incidence of anorexia nervosa in recent decades has been documented in the United States, United Kingdom, Switzerland, and Scotland (Jones, Fox, Babigian, & Hutton, 1980; Kendell, Hall, Hailey, & Babigian,

1973; Szmukler, McCance, McCrone, & Hunter, 1986; Willi & Grossman, 1983).

Second, anorexia nervosa has serious medical implications and carries a significant mortality estimated between 5% and 20% (Golden & Sacher, 1984). Thus, this disorder poses a serious health threat to the patient. The potential lethality of anorexia nervosa has been brought to awareness by public figures such as Karen Carpenter, who died of cardiac arrest secondary to anorexia nervosa.

The etiology of anorexia nervosa is complex and is best viewed as multidimensional in nature. Etiology discussed in the literature includes the biological, psychodynamic, familial, and sociocultural factors. For the purposes of this paper, family characteristics of the anorexic patient are of particular interest. These characteristics will be addressed in terms of demographic features, psychological characteristics of the family of origin, and family relationships.

In light of the increasing incidence of anorexia nervosa, the mental health professional can expect to treat some of these patients in the course of a career. The mortality rate associated with anorexia nervosa suggests an urgency in providing optimal care. Although the family's role in the pathogenesis of anorexia nervosa is not fully understood, the family remains a point of entry in the treatment process for many practitioners. To the extent that

the therapist adheres to stereotypes or misinformation about these families, the treatment process will be impeded. The focus of this paper is to clarify the current research regarding these families.

## Anorexia Nervosa Research Issues

A number of conceptual and methodological weaknesses characterize the current research on anorexic families. These weaknesses are sufficient to challenge the mental health practitioner to exercise caution in drawing stereotypes about these families. An important research issue is that current studies focus on families in which anorexia has already been diagnosed. The practitioner working with anorexic families should keep in mind that these individuals are coping with a loved one with a serious and disturbing disorder. Whether family relationships and patterns have been altered by the development of the anorexia remains untested in the literature.

The following sections address the lack of consensus regarding the diagnostic criteria for anorexia. The possibility that anorexia is most accurately conceptualized as a spectrum of syndromes rather than as a single disorder is also explored.

### Conceptual Issues

Anorexia nervosa and bulimia are related eating disorders. A primary conceptual issue is whether anorexia

nervosa and bulimia represent separate eating disorders or whether they belong on a continuum of the same syndrome. The current majority opinion is that anorexia nervosa and bulimia represent a spectrum of eating disorders (Golden & Sacker, 1984).

The terms bulimarexia and bulimia nervosa are used to encompass instances in which the patient has features of both anorexia nervosa and bulimia. In four independent studies, each involving over 100 patients with the diagnosis of anorexia nervosa, bulimia was found in approximately 40% of the subjects (Golden & Sacker, 1984).

In spite of the fact that some anorexics display symptoms of bulimia, differences related to psychological characteristics have been noted between anorexics and bulimics. Bulimic individuals are described as more extroverted, admit more frequently to a strong appetite, and tend to be older than anorexic patients. Bulimics also vomit more frequently, evidence more anxiety, guilt, depression, interpersonal sensitivity, and somatic complaints than anorexics. In contrast, anorexic patients are described as more introverted, display little overt psychic distress, and deny their hunger (Casper, Eckert, & Halmi, 1980; Strober, Salkin, Burroughs, & Morrell, 1982). In contrast to patients with anorexia nervosa, bulimics are able to acknowledge that they have an eating disorder and experience their symptoms as distressing (Fairburn & Cooper, 1982).

A spectrum of anorexia nervosa syndromes may exist. Whereas some cases develop as early as 9 years of age, others do not develop until adulthood or parenthood are achieved. Anorexia nervosa involves variability as to the presence of behavioral hyperactivity, binge and purge eating habits, and laxative abuse. There is no uniform personality pattern identified in anorexia. Patients also differ with regard to ego development, psychosexual development, interpersonal and family relationships, and social and academic competence (Bram, Eger, & Hamli, 1982; Swift & Stern, 1982; Yager, 1982). As research on anorexia nervosa continues, additional diagnostic categories can be developed which will better identify possible syndromes of anorexia nervosa.

The second conceptual issue concerns the diagnosis of anorexia nervosa. A dimensional approach to diagnosis that addresses not only whether a person has the disorder, but to what extent the person has it, appears to be congruent with the data available. A dimensional approach assesses severity of the illness, rather than a categorical inclusion or exclusion. For example, some patients experience a brief cessation of the menses, whereas others experience complete cessation of the menses (amenorrhea). An insistence by the researcher on the presence of amenorrhea may result in excluding for research purposes those subjects not meeting the strict diagnostic criteria.

The criteria for anorexia nervosa were developed in a hospital setting, and are based on patients with a relatively severe course. However, in an outpatient setting the distinctions between those having the disorder and those who do not are often not clear. Studies utilizing a categorical dimension may fail to incorporate subjects exhibiting many of the disease characteristics. Nevertheless, the categorical approach is often adopted for research purposes because it is easier to handle statistically, and it reflects the medical model (Szmukler, 1985).

Methodological Considerations

Anorexia nervosa research is characterized by several methodological weaknesses. The first issue concerns the diagnosis of anorexia nervosa. There is no consensus among researchers about the degree of weight loss necessary for the diagnosis of anorexia nervosa (Dickstein, 1985). The Diagnostic and Statistics Manual III (American Psychological Association, 1980) specified a weight loss of 25% for diagnosis of anorexia, and the DSM III-Revised (APA, 1987) changed this to 15%. There is variability in the research regarding the weight loss required for the diagnosis of anorexia nervosa.

This lack of consensus regarding criteria for the diagnosis of anorexia nervosa also extends to amenorrhea, another DSM III-R criterion for anorexia nervosa. The diagnosis of amenorrhea requires the absence of at least 3

consecutive menstrual cycles that would be expected to occur under normal circumstances. However, by using this criteria, a researcher is unable to use subjects who continue to menstruate, but who have severe disturbances on other dimensions of anorexia nervosa. Between 10% and 30% of patients cease menstruating before reaching a substantial weight loss, and others continue menstruating even after a significant weight loss.

The dimensional approach to diagnosis addressed earlier would help to accommodate these diagnostic difficulties. Utilizing a graded approach to diagnosis would allow the researcher to acknowledge serious disturbances in weight loss and distorted body image without eliminating for research purposes the patient who did not meet the full DSM III-R criteria.

The second issue concerns the fact that the diagnostic criteria utilized differ across studies. For example, the criteria for diagnosis in a hospital setting often proves unsatisfactory for outpatient populations. Hospitalized patients typically present with more severe pathology, have a chronic course of the illness, and have been unsuccessfully treated at a prior time. In contrast, outpatients may present with less severe symptoms. Consequently, they may not meet the same diagnostic criteria. This sampling bias raises the difficulty of comparing findings between inpatient and outpatient research studies (Theander, 1985).

The criteria for the diagnosis of anorexia nervosa as described in the DSM III-R (APA, 1987) are (a) refusal to maintain body weight exceeding a minimal normal weight for one's age and height, (b) strong fear of gaining weight or becoming fat (in spite of being underweight), (c) distorted body image, and (d) amenorrhea. Unfortunately, these were not generally accepted diagnostic criteria prior to 1987. Consequently, research studies conducted prior to 1987 do not uniformly adhere to these criteria. Many studies do not specify what criteria were used in making the diagnosis of anorexia nervosa.

A third issue involves the research on family issues. A great deal of the literature addressing the family characteristics of anorexics is speculative. Effective and valid techniques for measuring family patterns are lacking. There are several cautions to heed in the evaluation of the possible role of the family in the pathogenesis of anorexia nervosa. It is difficult to determine how much of what is described as typical family patterns represent a stress reaction to the anorexia nervosa, rather than preexisting and enduring family traits. Family processes are frequently studied only after the onset of the illness, making it difficult to differentiate between cause and effect.

This issue of what family patterns preceded the onset of the illness versus what patterns developed subsequent to the illness remains confused in the literature. In addition, it

is difficult to distinguish necessary preconditions in the family from those that permit but are not essential in contributing to the appearance of anorexia nervosa in a family member. For example, research indicating that enmeshment and parental overcontrol are observable in anorexic families must also account for the fact that many nonanorexic families exhibit these same characteristics (Yager, 1982).

These methodological issues must be taken into account in evaluating the research in anorexia nervosa. Despite the fact that empirical research on anorexia nervosa is in its early phase, studies are emerging which provide an increased understanding of the role of the family of origin in this disorder.

Selection Criteria

The selection criteria for empirical studies in this literature review includes a sample size of at least six subjects. This review does not include case studies or single subject designs.

The next section reviews the two different epistemological models used in family research. Demographic characteristics of anorexic families are then discussed. Individual pathology in first and second degree relatives of anorexics is evaluated in the following section. The last section of this review evaluates the literature concerning family relationships and family patterns. The concluding

remarks address the current state of research in the area of family characteristics and family patterns, and gives suggestions for future research.

## Family Research

The attempt to identity the family's contribution to the disorder of anorexia nervosa has historical roots. Many clinicians can identify with Physician Lasegue's observation in 1873 that distressed parents resort to pleading and threatening their anorexic children in attempting to cope with this illness. In attempting to treat anorexic patients, both Gull in 1874, and Charcot in 1889, recommended the separation of mother and daughter. In 1885, Stephens identified the exacerbation of a patient's anorexic condition after the mother visited the daughter in the hospital (Rakoff, 1983).

A number of studies have been conducted on the characteristics of families whose daughters have anorexia nervosa. The family research on anorexia is governed by two different types of epistemological models. The first model is the classic linear causality paradigm, which is also known as the medical model. The goal of this model is to find etiological characteristics in anorexic families. The majority of family research on anorexia nervosa is based on this model. Most of the characteristics identified by researchers who study anorexic families are two-generational.

These researchers also observe the incidence of neurotic symptoms in first degree relatives. This type of research is reflected in studies of demographic characteristics of anorexic families.

The second epistimological model for family research relating to anorexia is the circular interaction paradigm, also called the "systems" model (Dare, 1985). The family systems model describes the anorexic as an individual who has difficulty separating from the family and developing a separate, individuated identity. The problems in individuation are attributed to disturbances in family dynamics, role structure, and affective expression among family members (Humphrey, 1989).

## Demographic Characteristics

Much of the research on demographic characteristics is based on a retrospective analysis of medical records. Some studies reflect variability in diagnostic criteria and lack of adequate control groups. There are, however, some well-controlled studies which will be addressed.

### Social Class

The overrepresentation of anorexia patients in the higher social class is documented by well-controlled research. Askevold (1982) used hospital records to compare a group of 112 anorexia nervosa patients with 54 female physically ill inpatients and 354 psychosomatic patients.

His study investigated the role of social class in the frequency distribution of anorexia nervosa. The results of the study indicated that significantly more anorexia patients came from the high social classes than control groups.

In contrast, Heron and Leheup (1984) found that anorexics came from all social classes with no preponderance in the higher social classes. However, these findings are questionable due to the small sample of only 16 subjects.

In spite of the prevalence of anorexia nervosa in the higher social classes, there are indications that it is beginning to occur in the lower social classes, and among Blacks, Hispanics, and East Indians (Garfinkel & Garner, 1982; Silber, 1986). In a study of 21 Black female adolescents between 16 and 18 years of age, Silber (1984) concluded that anorexia nervosa is becoming more common among Black adolescents of the middle and professional classes. His assertion should be considered tentative due to the lack of previous incidence rates to use as a basis of comparison.

Birth Order

There appears to be no particular family structure that can be consistently associated with the diagnosis of anorexia nervosa. A retrospective study based on hospital records of 252 anorexic inpatients relating birth order to anorexia nervosa showed little evidence that this family dynamic is important in the etiology of the condition. In families with three children, the anorexic child came from any position in

the birth order (Gowers, Kadambari, & Crisp, 1985). Although there are descriptive reports in the research literature indicating anorexics as middle children, this has not been validated by studies using controls (Kog & Vandereycken, 1985).

History of Sexual Abuse

Several researchers (Oppenheimer, Howell, & Palmer, 1985; Tice, Hall, Beresford, Quinones, & Hall, 1989) have documented a history of sexual abuse in anorexics that ranges from two to four times higher than one would expect to see in the general population. Tice et al. (1989) found a statistically significant difference in the incidence of sexual abuse between eating disordered patients and a control group of patients admitted to a psychiatric hospital for other reasons. Among the anorexics and bulimics, 50% reported some type of abuse, as compared to 28% of the control group. This study indicated that fathers were the most frequent abusers, being involved in 30% of the cases, followed by brothers, family acquaintances, and strangers. The onset of this abuse occurred prior to age 17, as reported by 85% of these women. Several of these anorexic patients reported that their weight loss was a deterrent to future sexual behavior and that their emaciation represented a desire to be asexual.

This high incidence of sexual abuse among anorexics is consistent with a study by Oppenheimer et al. (1985). This

study involved 78 patients diagnosed with anorexia, bulimia, and mixed (features of both). These researchers found that 64% of these women reported being the victim of a coercive sexual event, 29% prior to the patient's 17th birthday. These events were frequently experienced by the subjects as distressing and significant. It should be noted, however, that the lack of a control group makes these findings difficult to compare to the normal population.

Since not all sexually traumatized individuals develop eating disorders and because some eating disordered individuals have not experienced this trauma, it is evident that incest or sexual abuse is neither necessary nor sufficient for the development of eating disorders. It should be considered to be one of many factors in the etiology of this complex illness (Sloan & Leichner, 1986).

Biological and Genetic Factors

There are several proposed biological explanations related to the etiology of anorexia nervosa. One theory holds that amenorrhea, secondary to the self-starvation, creates a disruption in the functioning of the hypothalamus. This leads to a decrease in appetite stimulation, which progresses to a total cessation of hunger stimulation. A second theory involves the body's secretions of cortisol. It is believed that anorexics secrete an excess amount of cortisol, which acts on the hypothalamus and causes a decrease in hunger stimulation. This excess secretion of

cortisol may also result in depression, which further decreases appetite and increases weight loss (Palmer, 1990).

Brone and Fisher (1988) purport that the abnormalities in hypothalamic functioning found in anorexia can be induced in normal subjects through prolonged experimental starvation. They consider the physiological correlates of anorexia to be secondary to the starvation, rather than contributors to the etiology of anorexia.

The data concerning anorexia nervosa in twins do not, at this time, support the assumption that genetic factors play a substantial role in the etiology of this illness (Vandereycken & Pierloot, 1981). Although a hereditary component may exist, the precise genetic involvement is unclear (Scott, 1986). Strober and Humphrey (1987) propose a possible interaction between genetic effects and family environment. For example, a person with a genetically determined predisposition to avoidance behavior could be more severely affected by a family environment that interferes with a sense of self-esteem and self-efficacy.

Holland, Sicotte, and Treasure (1988) studied 25 female monozygotic (MZ) twin pairs and 20 female dizygotic (DZ) twin pairs. They report that 56% of the MZ twin pairs and 5% of the DZ twin pairs were concordant for anorexia nervosa. Their criteria for concordant was that the second twin reported meeting the criteria for anorexia nervosa at some point in her life. The researchers acknowledge that their

twin pairs represented a severely afflicted group of anorexics. This study did not distinguish genetic from cultural transmission, since these twin pairs were raised in the same environment. This study relied on self reports of past behavior, and it is questionable whether this is an accurate method of determining concordance in twins. The results suggest that this disorder is influenced by family factors, either genetic or environmental.

The issue of genetic transmission or heritability of anorexia nervosa requires well controlled and unbiased studies of MZ and DZ twins. The most important research related to genetic transmission is adoptive studies of twins raised apart (Kog, Pierloot, & Vandereycken, 1983; Kog & Vandereycken, 1985). The current research on anorexia does not include adoptive twin studies.

## Individual Pathology in the Family

Individual pathology in anorexic families will be evaluated in terms of weight problems, psychiatric disorders, and substance abuse. There is a lack of empirical validation indicating that anorexic families have significantly greater pathology than the general population. However, the literature does suggest a slightly higher incidence of affective disorders among anorexic families. It is unclear whether these affective disorders preceded the disorder or developed as a consequence of it.

Weight Problems

A number of studies have investigated weight problems in the families of anorexic patients. The conclusions of these studies tend to support the absence of significant weight pathology in anorexic families. In a study which matched parents for age, occupational levels, education, and height, parents of anorexics did not differ from the control parents with regard to average weight or weight variations (Hamli, Struss, & Goldberg, 1978).

Hall, Leibrich, Walkey, and Welch (1986) compared "weight pathology" in 58 mothers of anorexia nervosa patients and a control group comprised of 204 mothers' of schoolgirls. The mothers filled out questionnaires evaluating weight history and attitudes towards weight-related matters. The control group was matched for age and socioeconomic status. This study showed no significant differences in the mothers reported current weights, or the family weight history (Hall, Leibrich, Walkey, & Welch, 1986).

A study conducted by Garfinkel, Garner, Rose, Darby, Brandes, O'Hanlon, and Walsh (1983) indicated that the parents of anorexics displayed no more concern with weight regulation and dieting than normal controls. These researchers noted no differences with regard to the parents' weight, body size, or satisfaction with body image. This study compared anorexic families with normal controls, who were matched for social class.

Psychiatric Disorder

The research literature does not indicate a difference between parents of anorexics and parents of controls on various measures of personality characteristics. It, however, does suggest a higher incidence of affective disorders in anorexic families than in control families.

Garfinkel et al. (1983) compared the psychological functioning of anorexic families to a normal control group matched for social class. This study utilized psychometric instruments including the Sixteen Personality Factor Questionnaire and the Beck Depression Inventory. The study failed to show significant differences between parents of anorexics and parents of controls on various measures of depression and personality characteristics. The exception to this was the increased conscientiousness of the anorexics fathers.

This increased conscientiousness should be considered tentative due to the small sample size, and the fact that some fathers did not complete the test, thus skewing the results. It does, however, coincide with the heightened expectations for performance and achievement that have been suggested to be present in anorexia.

Morgan and Russell (1975) studied 41 inpatients diagnosed with anorexia nervosa. They identified a positive history of mental illness in 29% of the patients' parents and siblings. In 20% of the cases, the mothers' mental illness

resulted in a lengthy separation from her infant daughter who later developed anorexia nervosa. Methodological problems include the lack of a control group and a subject sample comprised of severely disturbed patients with a long and intractable illness. The criterion for mental illness was that a psychiatric consultation had been ordered for the relative. This criterion does not justify the assumption of mental illness for these family members.

A number of studies indicate a higher than average incidence of affective disorders in the families of anorexics. A comparison of first and second degree relatives of 25 anorexics to 25 controls indicated that 22% of the patients' relatives had a history of primary affective illness, compared with 10% of the controls (Winokur, March, & Mendels, 1980). These data were collected in an interview with the subject and at least one relative.

A higher incidence of affective disorders in anorexic families was also found by Gershon, Hamovit, and Schreiber (1983). There researchers identified depression in 13% of anorexics' first degree relatives, compared to 6% for normal controls. Data collection involved interviews with 54% of the relatives and reported family history for the others.

This increased incidence was also identified by Rivinus, Biederman, and Herzog (1984) who identified depression in 16% of relatives of anorexic patients, compared to 5% for control relatives. An increased incidence of affective disorder in

anorexic families was also identified by Logue, Crowe, and Bean (1989) and Cantwell, Sturnzenberger, Burroughs, Salkin, and Green (1977).

The research indicates a slightly higher rate of affective disorders in anorexic than control families. However, the percentages are still relatively low, and these studies do not provide compelling evidence that affective disorders are etiologically significant. It is unclear whether the increased incidence of depression among these anorexic families preceded the disorder, or developed as a consequence of the disorder.

Substance Abuse

The research literature on the incidence of alcoholism among anorexic families yields conflicting conclusions. It does appear that the incidence of alcohol abuse among these families is no higher than the general population.

Winokur et al. (1980) found a lower incidence of alcohol abuse in relatives of anorexic patients (4%) than in relatives of normal controls (7%). These researchers compared first and second degree relatives of 25 anorexic patients and 25 normal controls. Data collection was done by an interview with the patient and at least one relative.

Hudson, Pope, Jones, and Yurgulun-Todd (1983) identified alcohol use disorders in 5.7% of anorexic families. However, the lack of an appropriate control group leaves these results questionable.

Consistent with Hudson's finding was a study done by Strober et. al. (1982) who found a 4% prevalence of alcoholism in first degree relatives of anorexic patients. This study compared 35 restricting anorexics with 35 bulimic anorexics and utilized a structured personal interview with the relatives. The lack of a control group in this study again makes these findings questionable. This percentage also appears too low to indicate that familial alcoholism is strongly related to anorexia.

Mogaard, Chambers, Golbeck, Elder, and Ferguson (1989) conducted a study on alcohol use in anorexic families. For the control group, alcohol use was investigated by interviews with a physician and social worker. The control group was interviewed by telephone. These researchers found a statistically significant higher rate of maternal alcoholism in anorexic families than in the control group. This finding of increased maternal alcoholism may be due to the fact that the interview process for the anorexic families was more intensive and personal in nature than it was for the control group. The anorexic families had a hospitalized daughter, and consequently could have used less denial than the controls who had more anonymity and responded by phone.

The research literature on drug use in anorexic families lacks adequate controls. Strober et al. (1982) rated drug use disorders at 1%, and Hudson et al. (1983) rated this at 3%. It should be noted that these studies did

not include control groups. Research of drug use in anorexic families utilizing adequate controls is necessary in order to draw conclusions as to whether this appears at a higher rate in these families.

The research literature suggests that the incidence of alcohol abuse among anorexic families is not greater than among controls. The study done by Mogaard et al. (1989) indicating greater maternal alcoholism in anorexic families than controls utilized different methods of data collection for these groups. These differences may account for the higher maternal alcoholism rate noted in the anorexic group. The literature on drug use in anorexic families lacks adequate controls and is therefore difficult to generalize to the normal population.

## Family Relationships

There are a number of studies suggesting that anorexia nervosa is associated with abnormal patterns of family interaction. Family relationships have been evaluated by self-report studies and interactional research. The self-report studies indicate that anorexic families have difficulty in the areas of affective involvement and role differentiation. These observations are consistent with the family systems research, which identifies disordered family interaction patterns as possible precipitants of the development of anorexia nervosa.

Self-Report Studies

A considerable amount of variation characterizes the current descriptions of parent-child interactions in anorexia nervosa. Several researchers have used self-report measures to compare perceived family relationships between anorexic family members and those of normal controls. These studies indicate that anorexics describe their family relationships as more disturbed than do controls.

Humphrey (1986) found that anorexic family members perceived their relationships as more isolated, conflictual, and detached than did the control group. The anorexics also viewed their parents as more rejecting and neglectful toward them than did the normal controls. In this study, Humphrey compared parental relationships and introjects among young women with anorexia nervosa, bulimia-anorexia, and a normal control group. Each of the eating disordered groups consisted of 20 inpatient subjects. The subjects completed the Benjamin Structural Analysis of Social Behavior model and rating scales (SASB). The SASB has a psychodynamic framework which views anorexia as a phobic and obsessive compulsive reaction to unrecognized anger and anxiety.

It should be noted that this sample is atypical, since the anorexic subjects were severely disturbed, and had been in psychodynamically oriented treatment for 28 months. It is questionable as to how the psychodynamically oriented treatment process of the anorexic group affected their

perceptions of parental attitudes, as compared to the control group which received no treatment.

A study by Garfinkel et al. (1983) suggested that anorexics and their mothers perceived the family as having problems in the areas of task accomplishment, role performance, and verbal and affective communication. The fathers did not report similar difficulties, which may be attributed to a difference in perception or a lack of willingness to report difficulties. This study utilized a self-report questionnaire called the Family Assessment Measure to assess family members' perceptions of family dynamics. This instrument was chosen because the subscales on achievement expectations and control issues seemed particularly applicable to anorexic families. This study included 23 anorexics and 23 controls, matched for social class.

A recent study by Waller, Calam, and Slade (1989) indicated that anorexic women rated their family functioning as unhealthy in affective involvement and behavioral control. According to this study, affective involvement was described as concern for one another, and behavior control was described as clarity of rules. These researchers compared 41 eating disordered women with 27 controls. The eating disordered group was comprised of outpatients and members of self-help groups. These researchers used the McMaster Model of Family Functioning to measure the subjects on six

dimensions: problem solving, communication, roles, affective responsiveness, affective involvement, and behavior control.

Houben (1981) examined the relationships between the father, mother, and anorexic daughter. He identified a statistically significant difference in how the anorexic and normal groups experienced the role differentiation among family members. The anorexia nervosa families did not experience as much discrimination or difference among various family relationships as compared to the normal group. In the anorexic group, the fathers and mothers experienced their relationships with their daughters as similar to their marital relationship. These family members reported how they felt themselves in relationship to one another and how they experienced the attitude of the other toward themselves. This lack of role differentiation is consistent with the enmeshment observed in anorexic families by the family systems researchers.

In a retrospective study based on treatment records, Heron and Leheup (1984) found that anorexics were significantly likely to have perfectionistic personality traits and to come from a family with little overt conflict and little contact with the outside world. These researchers hypothesized that such a child has limited avenues of developing a sense of identity as an adolescent. These researchers compared 16 adolescent anorexic girls with a matched control group.

These studies consistently report difficulties in the areas of affective involvement and role differentiation. However, it is difficult to determine whether these reported disturbances in family relationships existed prior to the onset of the anorexia nervosa or resulted from it. These self-report studies do not observe the actual family interaction, but rather rely on the individual's reported experience of the family relationships. The hypotheses resulting from these studies should be studied in interactional research. This will assist in determining whether these self-reports accurately reflect actual family patterns.

Interactional Research

Minuchin, Rosman, and Baker (1978) suggest that anorexia nervosa is precipitated by several disordered interactional patterns with the family system. They utilized the systems model in a comparative research design with control groups. Three psychosomatic groups (anorexics, diabetics, and asthmatics) were compared with two control groups (medically stable diabetics with behavior problems and nonpsychosomatic diabetics) on family interaction patterns. The study involved direct observation of the whole family conducting family tasks. Videotapes of the interaction were coded on behavioral parameters.

Minuchin et al. (1978) concluded that anorexic families were rigid in their structure, enmeshed in their

communication, overprotective, conflict avoidant, and unable to resolve conflict. These researchers viewed the symptomatic behavior (anorexia nervosa) and the family process as creating a self-regulating cycle which minimized change and conflict in the anorexic family. Enmeshment can be defined as the quality of over-protectiveness and the belief possessed, particularly by the parent, that one knows the feelings and beliefs of other family members, including the anorexic daughter.

The enmeshment observed by these family systems researchers is consistent with the self-report studies which identify role differentiation as a problem in anorexic families (Garfinkel et al., 1983; Houben, 1981; Waller et al., 1989). The observation of this enmeshed quality of relationships also parallels conclusions by Kalucy et al. (1977) that anorexic families tend to be unusually close, loyal, and mutually interdependent. As a result of this enmeshment, it is purported by some researchers that the anorexic child has difficulty separating from the family and developing a separate identity (Bruch, 1973; Humphrey & Stern, 1988).

Goldstein (1981) also studied anorexic families in directly observed interaction. Based on the occurrence of certain verbal and nonverbal behaviors during directly observed interaction, Goldstein concluded that the parents of the anorexics showed significantly more dependency/insecurity

than the parents of the normal group. He compared the parents of schizophrenics, anorexics, and normals on measures of communication deviance, negative affective style, and dependency/insecurity. His observation of increased dependency appears consistent with studies suggesting poor role clarification in anorexic families. The parental tendency towards dependence could be a factor in the development of enmeshed relationships between parents and children.

Humphrey (1989) supports the description of anorexic families given by Minuchin et al. (1978). She observed and rated family interactions among subtypes of eating disorders and a normal group. She concluded that the anorexic's family provided too much nurturance (in comparison to the normal group), which undermined the daughter's efforts to individuate and kept her dependent on her parents. These parents also ignored and negated her efforts to express herself and failed to recognize her developmental needs. These mixed parental messages contributed to the daughter's ambivalence about separating from her parents. The pattern of overcontrol and negation of the anorexic's true needs has contributed to her destructive and restrictive attitudes toward her body.

Harding and Lachenmeyer (1986) investigated the variables of overprotection, enmeshment, and rigidity, as described by Minuchin et al. (1978). In a self-report study,

30 female anorexic college students and a control group completed the Structural Family Interaction Scale, The Eating Attitudes Test, and a global clinical assessment measure. These researchers found that the two groups did not differ on any of these particular family variables. However, they also examined Bruch's variable of locus of control (sense of effectiveness). Their conclusions suggested that the anorexics were significantly more external in locus of control than control subjects.

These results lend support to Bruch's assertion that a sense of personal ineffectiveness underlies anorexia nervosa. It should be noted that the mean age of the subjects was 26.4. It is possible that the subjects had difficulty remembering family interaction patterns that occurred several years prior to the study. The average length of time away from home was 6 years for these subjects. Another possibility is that early family patterns influence one's locus of control, and that the family patterns described by Minuchin et al. (1978) set the stage for the later development of an external locus of control. This remains untested in the anorexia literature at this time.

It is difficult to generalize the family systems formulations to all anorexic families for several reasons. First, sample selections are biased in investigations such as that by Minuchin et al. (1978). This study involved intact families with younger patients, and is not representative of

many anorexic families. Second, these studies may involve observer rating bias, in which the researcher's expectations and hypothesis may affect what is recorded. Third, these family systems are not particular to anorexia nervosa. While they may help to explain how symptoms can develop and be sustained, they do not account specifically for the emergence of anorexia nervosa rather than another disorder (Yager, 1982). Finally, since these family patterns are studied after the onset of the disease, the question remains whether these patterns existed prior to the anorexia nervosa or developed subsequent to it.

## Concluding Comments

All current studies on anorexia nervosa are retrospective, and it is difficult to determine what the family patterns were before the onset of the disease. Existing research has been conducted on families who have an identified sick daughter; thus, the family communications and relationships may have changed to cope with the sick child (Rosenfield, 1988). Enmeshment, overprotectiveness, and conflict may develop as a response to this illness, as family members attempt to cope with a potentially life threatening illness. Longitudinal studies are needed to identify communication patterns as they exist prior to the development of the disease.

Research on families who have children at risk for developing anorexia nervosa will provide useful information about etiological factors. Studies on high risk groups such as models, ballerinas and their families may identify family patterns or characteristics associated with the development of anorexia nervosa. Other high risk groups may include siblings of anorexics and the children of women who have had anorexia. These studies will provide information helpful from a preventive viewpoint.

Research addressing possible syndromes of anorexia nervosa may provide information helpful in better understanding and treating this disease. The DSM III-R identifies types of schizophrenia, each with unique characteristics and a differing prognosis. The diagnosis of anorexia has no similar distinctions. However, a young girl who develops symptoms at 12, prior to leaving her family of origin and before sexual maturation, may differ significantly from a 30 year-old woman who develops symptoms following marriage and childbirth. Research aimed at studying this disease at differing ages of onset will be helpful in identifying possible types of syndromes.

The issue of genetic transmission or heritability of anorexia nervosa requires future research involving monozygotic and dizygotic twins. Adoptive twin studies have the potential to contribute significant information about possible genetic involvement in the transmission of anorexia

nervosa. In studies of twins reared apart, the effect of a common environment has been decreased, which provides clearer differentiation of genetic versus environmental effects (Mitchell & Eckert, 1987).

Future research should include the use of appropriate comparison groups of families without anorexia nervosa (Rosenfield, 1988). Studies which attempt to measure family features in the absence of a control group are highly questionable. The need for adequate controls also applies to family systems research studies. While family characteristics such as enmeshment and overprotection may help to explain how symptoms are sustained, they do not account for the emergence of anorexia nervosa, as opposed to another disorder. Faust (1987) states that research on the role family conflict plays in the development of anorexia nervosa is nonexistent. Garfinkel and Garner (1982) question whether family conflict is the result of having a sick family member in the home or whether it is etiologically significant in anorexia nervosa. These issues cannot be investigated without the inclusion of normal controls in family research. Longitudinal research is also necessary to investigate such questions.

Yager (1982) suggests that future research should include multifactorial hypotheses. Family oriented research should include both the particular individual vulnerabilities of the pre-anorexic child as well as the influences of the

family system. This would help to determine the combinations of individual and family characteristics that contribute to the development of anorexia nervosa.

Research aimed at understanding the development of eating disorders is likely to allow for more effective intervention prior to the onset of the illness (Kog, Pierloot, & Vandereycken, 1983). With the increase in eating disorders, the potential for death, and cost of treatment, the capacity to intervene early in the disease process becomes important.

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